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OCT 10 1984
O. C. D.
ARTESIA, OFFICE

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-63

Type Test ☒ Initial ☐ Annual ☐ Special			Test Date 10-3-84								
Company CITIES SERVICE OIL & GAS CORP.			Connection /								
Pool UNDES. BURTON FLAT MORROW			Formation MORROW								
Completion Date 9-28-84		Total Depth 11,620	Plug Back TD 11,590	Elevation 3232.5' GR							
Cas. Size 5 1/2"	Wt. d	Set At 11,604	Perforations: From 11,407' to 11,573'								
Thq. Size 2 7/8"	Wt. d	Set At 11,298	Perforations: From OPEN ENDED								
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE			Packer Set At 11,293'	Farm or Lease Name Government "AD" Com							
Producing Thru Tubing		Reservoir Temp. °F 188° @ 11,490	Mean Annual Temp. °F	Baro. Press. - P _g 13.2							
L 11,490	H 11,490	G _g .582	% CO ₂ 1.053	% N ₂ .325							
			% H ₂ S	Prover 4.026							
			Meter Run Flange	Taps							
FLOW DATA											
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							2690	52°	PKR	CHOKE	24 Hrs
1.	4	X	1.500	490	10	69°	2445	59		8/64	1 Hr
2.	4	X	1.500	510	24	69	2292	61		10/64	1 Hr
3.	4	X	1.500	525	42	68	2065	61		12/64	1 Hr
4.	4	X	1.500	525	76	70	1772	61		15/64	1 Hr
5.											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd				
1	10.84	71.64	513.2	.9915	1.311	1.039	1049				
2	10.84	112.06	523.2	.9915	1.311	1.039	1641				
3	10.84	150.35	538.2	.9924	1.311	1.041	2207				
4	10.84	202.25	538.2	.9905	1.311	1.040	2961				
5											
NO.	R _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Dry _____ Mcf/bbl.						
1	.76	529	1.52	.927	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.						
2	.77	529	1.52	.926	Specific Gravity Separator Gas .582 XXXXXXXXXX						
3	.80	528	1.51	.922	Specific Gravity Flowing Fluid XXXXX						
4	.80	530	1.52	.924	Critical Pressure 676 P.S.I.A.						
5					Critical Temperature 349 R						
$P_c = 2717.8$ $P_c^2 = 7386.4$					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.824$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.702$						
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	AOI = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.039$						
1		2468.7	6094.5	1291.9	Post FD-2 10-19-84 Camp + BK						
2		2318.3	5374.5	2011.9							
3		2100.9	4413.8	2972.6							
4		1826.5	3336.1	4050.3							
5											
Absolute Open Flow 5,039 Mcfd @ 15.025					Angle of Slope @ 48.5			Slope, n .885			
Remarks: Calculated from known B.H.P. taken with a Kuster Gauge, set @ 11,490'											
Approved By Commission:			Conducted By: W.S.			Calculated By: R.R.			Checked By: R.R.		